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MIL-STD 2045-17508-2
26 July 1994

DRAFT
MILITARY STANDARD

Information Technology
DOD Standardized Profiles AFT1(D)

FILE TRANSFER, ACCESS, AND MANAGEMENT

Part 2: Definition of Document Types, Constraint Sets, and Syntaxes

AMSC N/A

AREA DCPS

Foreword

This military standard is approved for use by all Departments and Agencies of the Department of Defense (DOD).

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be of use in improving this MIL-STD should be addressed to the:

Joint Interoperability and Engineering Organization (JIEO)
ATTN: TBBD
Fort Monmouth, New Jersey 07703-5613

by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this MIL-STD or by memorandum.

This MIL-STD 2045-xxxx series DOD Standardized Profile (DSP) is a functional standard produced by the Data Communications Protocol Standards (DCPS) Technical Management Panel (DTMP). DTMP functional standards are functional groupings of base standards. Referenced base standards may be commercial, DOD or de facto standards, although International Standards (produced by ISO, CCITT, and other bodies) are preferred when possible.

This Defense Standardized Profile (DSP) is a functional DOD Data Communications Protocol Standard (DCPS) produced by the DCPS Technical Management Panel (DTMP). The MIL-STD-2045 document series was established within the DCPS Standardization Area to allow for the enhancement of commercial standards or the development of standards that are unique to DoD.

The MIL-STD-2045-10000 series, MIL-STD-2045-10000 to MIL-STD-2045-19999 inclusive, will be used to describe how DOD will implement commercial, international, national, federal, or military standards within the functional profile concept to provide required network services. The Government Open Systems Interconnection Profiles (GOSIP) will serve as the base for developing the 10000 series with DOD enhancements, unique military standards, and interim standards being used only when necessary.

The MIL-STD-2045-20000 series, MIL-STD-2045-20000 to MIL-STD-2045-29999 inclusive, will be used to describe DOD enhancements and extensions to existing commercial, international, national, or federal standards.

The MIL-STD-2045-30000 series, MIL-STD-2045-30000 to MIL-STD-2045-39999 inclusive, will be used to describe protocols and services unique to DOD that will not be supported by commercial, international, national, or federal standards.

The MIL-STD-2045-40000 series, MIL-STD-2045-40000 to MIL-STD-2045-49999 inclusive, will be used to document interim standards. Interim standards document protocols and services needed by DOD until these protocols and services are described in either a GOSIP or a MIL-STD-2045-20000 or -30000 series standard.

The MIL-STD-2045-50000 series, MIL-STD-2045-50000 to MIL-STD-2045-59999 inclusive, will be used to describe how DOD will implement commercial, international, national, federal, or military standards within the functional profile concept to provide required network services. The Government Open Systems Interconnection Profiles (GOSIP) will serve as the base for developing the 50000 series with DOD enhancements, unique military standards, and interim standards being used only when necessary. The difference between MIL-STD-2045-10000 series and the MIL-STD-2045-50000 series is that the 50000 series are interim profiles.

Specific details and instructions for establishing a MIL-STD-2045 document, as well as profile development guidelines, are documented in MIL-HDBK-829. DTMP Working Groups shall be responsible for DSP development and informal Service or Agency coordination; the DTMP Plenary shall be responsible for final review and approval.
This document was produced as an outgrowth of a requirement established for transmitting digital imagery and imagery related products using the National Imagery Transmission Format Standard (NITFS), and is intended to be a file transfer profile for end systems to communicate over DOD or commercial circuits.

This part of MIL-STD 2045-17508 contains one normative annex and one informative annex.

Annex A (normative)	Amendments and corrigenda
Annex B (informative)	Concluding Material

This document is a DSP for transmission of digital imagery using a file transfer protocol. It is in addition to the current Taxonomy and Framework for International Standardized Profiles.

The current technical content of the document has been derived from ISO 8571, parts 1 through 4. However, this document is based on DOD requirements. Differences between the content of this document and the base standards may exist.

For DOD acquisition purposes, where such differences exist, this DSP shall be the controlling document.

The Preparing Activity for this standard is the Data Communication Protocol Standards Technical Management Panel (DTMP). The custodians for the document are identified in the Defense Standardization Program, "Standardization Directory (SD-1)" and are classified in the Federal Supply Classification (FSC) system under Data Communication Protocol Standards (DCPS). Additional information can be obtained from:

Joint Interoperability and Engineering Organization
ATTN: DTMP Chairman
Ft. Monmouth, New Jersey 07703-5613

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Introduction

This DOD Standardized Profile (DSP) is defined within the context of functional standardization, in accordance with the principles specified by ISO/IEC TR 10000, “Framework and Taxonomy of International Standardized Profiles” and MIL-HDBK-829. The context of functional standardization is one part of the overall field of Information Technology (IT) standardization activities - covering base standards, profiles, and registration mechanisms. A profile defines a combination of base standards that collectively perform a specific well-defined IT function. Profiles standardize the use of options and other variations in the base standards to promote system interoperability and to provide a basis for the development of uniform, internationally recognized system tests.

One of the most important roles for a DSP is to serve as the basis for the development of recognized tests. DSPs also guide implementors in developing systems that fit the needs of the US Department of Defense (DoD). DSPs are produced not simply to ‘legitimize’ a particular choice of base standards and options, but to promote real system interoperability. The development and widespread acceptance of tests based on this and other DSPs is crucial to the successful realization of this goal.

The base standards of this DSP include Open Systems Interconnection (OSI) Layer Standards from the OSI Reference Model.

The specifications in this part of MIL-STD 2045-17508 contains the basic definitions of document types, constraint sets, and abstract syntaxes as used and referenced in the FTAM application.

Information Technology - DOD Standardized Profile (DSP) AFT1(D) - File Transfer, Access, and Management - Part 2: Definition of document types, constraint sets, and syntaxes

1 Scope

1.1 General

This part of MIL-STD 2045-17508 contains the basic definitions of documents types, constraint sets, abstract syntaxes, and transfer syntaxes as used and referenced in FTAM application MIL-STD 2045-17508-1, MIL-STD 2045-17508-3, MIL-STD 2045-17508-6. Additional document types, constraint sets, and syntaxes may be defined and added to this part of MIL-STD 2045-17508 to be referenced by either existing parts of MIL-STD 2045-17508 or further parts yet to be defined.

1.2 Position within the taxonomy

This part of MIL-STD 2045-17508 is the second part of a multi-part DSP for AFT1n(D) File Transfer, Access, and Management. The multi-part DSP consists of the following parts:

Part 1: Specification of ACSE, Presentation, and Session Protocols for the use by FTAM

Part 2: Definition of document types, constraint sets and syntaxes

Part 3: Simple File Transfer Service (unstructured)

Part 6: File Management Service

It may be combined with any T-Profiles (see ISO/IEC TR 10000) specifying the OSI connection-mode transport service.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of this part of MIL-STD 2045-17508. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of MIL-STD 2045-17508 are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by DSPs to such documents is that they may be specific to a particular edition.

Amendments and corrigenda to the base standards referenced: See annex A for a complete list of these documents which are used in this part of MIL-STD 2045-17508.

2.1 Government Documents:

2.1.1 Specifications, standards, and handbooks.

The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

MIL-HDBK 829: July 1994 *Guidelines for Developing Data Communications Profiles.*

DOD activities may obtain copies of DOD directives through their own publication channels or from the DOD Single Stock Point, Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Other federal agencies and the public may purchase copies from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

Copies of Federal Information Processing Standards (FIPS) are available to Department of Defense activities from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120-5099. Others must request copies of FIPS from the National Technical Information Services, 5285 Port Royal, Springfield, VA 22161-2171.

2.1.2 Other Government documents, drawings, and publications

None.

2.2 Non-Government publications

The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation.

2.2.1 Profiles

ISO/IEC ISP 10607-1: 1990, Information technology - International Standardized Profiles AFTnn - File Transfer, Access and Management - Part 1:Specification of ACSE, Presentation and Session Protocols for the use by FTAM.

ISO/IEC ISP 10607-3: 1990, Information technology - International Standardized Profiles AFTnn - File Transfer, Access and Management - Part 3:AFT11 - Simple File Transfer Service (unstructured).

DIS/IEC ISP 10607-6: 1990, Information technology - International Standardized Profiles AFTnn - File Transfer, Access and Management - Part 6:AFT3 - File Management Service.

2.2.2 Base Standards

ISO 8571-1: 1988, Information processing systems - Open Systems Interconnection - File Transfer, Access and Management - Part 1:General introduction.

ISO 8571-2: 1988, Information processing systems - Open Systems Interconnection - File Transfer, Access and Management - Part 2: Virtual Filestore definition.

ISO 8571-3: 1988, Information processing systems - Open Systems Interconnection - File Transfer, Access and Management - Part 3:File Service Definition.

ISO 8571-4: 1988, Information processing systems - Open Systems Interconnection - File Transfer, Access and Management - Part 4:File Protocol Specification.

ISO 8571-5: 1990, Information processing systems - Open Systems Interconnection - File Transfer, Access and

Management - Part 5:Protocol Implementation Conformance Statement Proforma.

2.2.3 Other Non-Government documents, drawings, and publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation.

ISO 6523: 1984, Data interchange - Structure for the identification or organizations.

ISO 8824: 1987, Information processing systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1).

(Application for copies of these documents should be addressed to the American National Standards Institute, 11 West 42nd Street, NY, NY 10036 or to ISO, Van Demonstrate 94, 1013 CN Amsterdam, Netherlands.)

[1)]To be published

2.3 Order of precedence.

In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3 Definitions

The terms used in this part of MIL-STD 2045-17508 are defined in the referenced base standards.

4 Abbreviations and Acronyms

This clause lists only abbreviations as used in clauses 1 to 5.

AFT	Profile sub-class: File Transfer, Access and Management
ASN.1	Abstract Syntax Notation One
FTAM	File Transfer, Access and Management
ISP	International Standardized Profile
OSI	Open Systems Interconnection

5 Conformance

No conformance requirements are specified in this part of MIL-STD 2045-17508.

NOTE - This part of MIL-STD 2045-17508 is a register of document types, constraint sets, abstract syntaxes, and transfer syntaxes. Conformance requirements are specified in the parts of MIL-STD 2045-17508 which reference these objects.

6 Document type definitions

6.1 NBS-9 File Directory File

6.1.1 Entry number : NBS-9

6.1.2 Information objects

No additional requirements.

6.1.3 Scope and field of application

This document defines the contents of a file for transfer (not for storage) using FTAM.

6.1.4 Reference

ISO 8571, Information processing systems - Open System Interconnection - File Transfer, Access and Management.

6.1.5 Definitions

This definition makes use of the terms data element, data unit, and file access data unit as defined in ISO 8571-1.

6.1.6 Abbreviations

FTAM	File Transfer, Access, and Management
NBS	National Bureau of Standards, USA

6.1.7 Document semantics

No additional requirements.

6.1.8 Abstract syntactic structure

No additional requirements.

6.1.9 Definition of transfer

6.1.9.1 Datatype definition

No additional requirements.

6.1.9.2 Presentation data values

No additional requirements.

6.1.9.3 Sequences of presentation data values

No additional requirements.

6.1.10 Transfer syntax

No additional requirements.

6.1.11 ASE specific specifications for FTAM

No additional requirements.

6.2 INTAP-1 Record File

6.2.1 Entry number : INTAP-1

6.2.2 Information objects

Table 2 - Information objects in INTAP-1

No additional requirements.

6.2.3 Scope and field of application

This document type defines the contents of a file for storage, for transfer and access by FTAM.

6.2.4 References

ISO 8571, Information processing systems - Open System Interconnection - File Transfer, Access and Management.

6.2.5 Definitions

This definition makes use of the terms data element, data unit, and file access data unit as defined in ISO 8571-1.

6.2.5.1 record : an ordered series of one or more record-elements. Data units of this document type consist of one or more records (see figure 1).

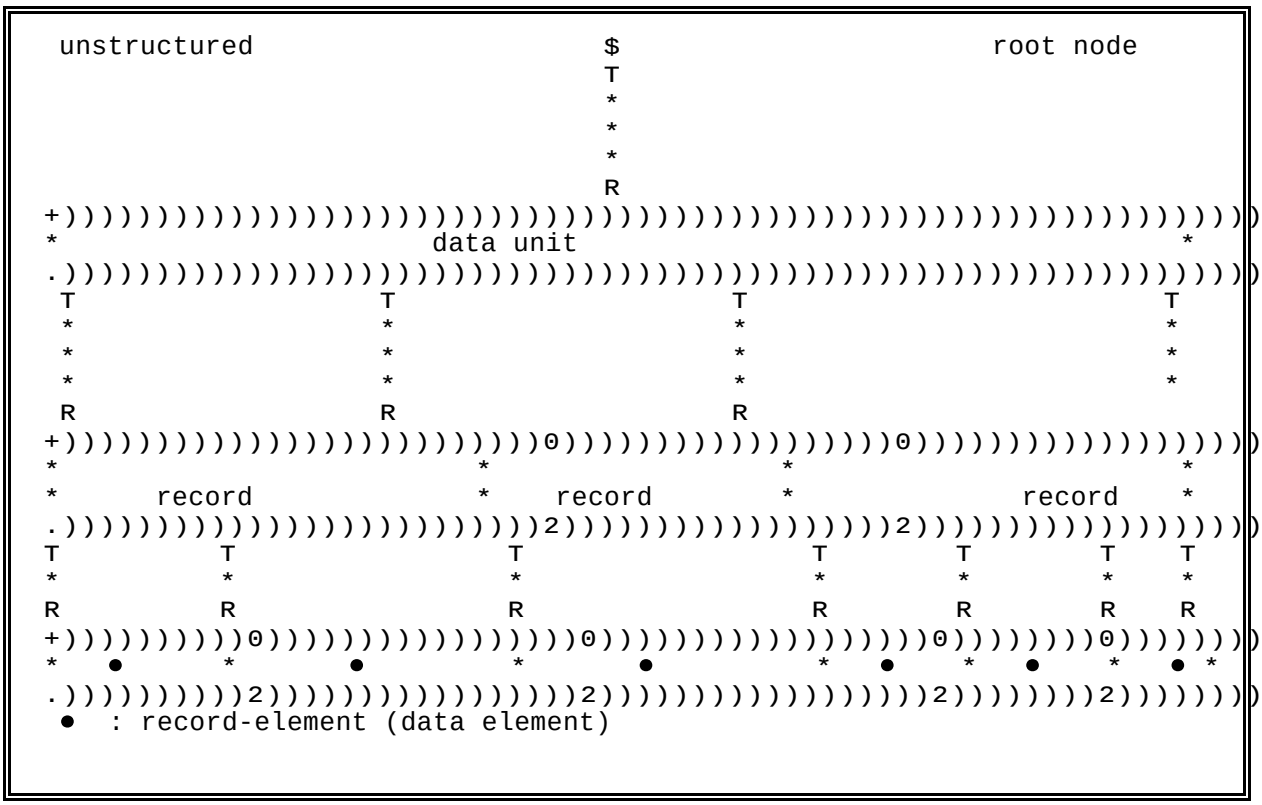

Figure 1 - INTAP-1 document type structure

6.2.6 Abbreviations

FADU File Access Data Unit
FTAM File Transfer, Access and Management
INTAP Interoperability Technology Association for Information Processing, Japan

6.2.7 Document semantics

No additional requirements.

6.2.8 Abstract syntactic structure

No additional requirements.

6.2.9 Definition of transfer

6.2.9.1 Datatype definition

No additional requirements.

6.2.9.2 Presentation data values

No additional requirements.

6.2.9.3 Sequences of presentation data values

No additional requirements.

6.2.10 Transfer syntax

No additional requirements.

6.2.11 ASE specific specifications

6.2.11.1 Simplification and relaxation

No additional requirements.

6.2.11.2 The EXTEND operation

No additional requirements.

6.2.11.3 The REPLACE operation

No additional requirements.

7 Constraint sets

Reserved for future extensions to this part of MIL-STD 2045-17508.

8 Abstract syntaxes

8.1 Abstract syntax NBS-AS2

Abstract syntax name:

No additional requirements.

8.2 Abstract syntax INTAP-AS1

Abstract syntax name:

No additional requirements.

9 Transfer syntaxes

9.1 Transfer syntax INTAP-TS1

Transfer syntax name:

No additional requirements.

9.1.1 Basic encoding

No additional requirements.

9.1.2 Compression method

No additional requirements.

ANNEX A (normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committee concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1, but at the date of publication of this part of MIL-STD 2045-17508 they were not yet incorporated in the text of the corresponding base standards ar referenced in clause 2. The amendments and corrigenda listed below are considered as normative references in this part of MIL-STD 2045-17508.

FTAM

ISO 8571-1/Cor.1:1991

ISO 8571-2/Cor.1:1991

ISO 8571-3/Cor.1:1991

ISO 8571-3/Cor.2:1992

ISO 8571-4/Cor.1:1992

ANNEX B (informative)

CONCLUDING MATERIAL

B.1 Deviations from Base Standards/Referenced Profiles

None.

B.2 Subject Term (Keyword) Listing

Communication Protocol Standards
Data Communications
Functional Profiles
Interoperability
Application
File transfer
Standards

B.3 Preparing Activity

DISA-JIEO (Project DTMP-0013)

B.4 Reviewing Activities

Army :	SC, PT
Air Force:	13, 17, 29, 33, 90
DLA:	DH
DMA:	MP
DIA:	DI
DOT:	OST
NSA:	NS
OASD:	IQ, DO, IR
ODISC4:	AC
NAVY:	EC, CH, ND, TD, OM
USMC:	MC, CG

B.5 Custodians

DISA:	DC
Army:	SC
Air Force:	90
Navy:	OM
DIA:	DI
NSA:	NS
USMC:	MC
DLA:	DH
Other:	Joint Staff/Architecture & Integration
	USSPACECOM

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

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I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER **MIL-STD 2045-17508-2**	2. DOCUMENT DATE *(YYMMDD)* **940726**

3. DOCUMENT TITLE **FTAM Part 2: Definition of Document Types, Constraint Sets, and Syntaxes**

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
c. ADDRESS *(Include Zip Code)*	d. TELEPHONE *(Include Area Code)* (1) Commercial (2) AUTOVON *(If applicable)*	7. DATE SUBMITTED *(YYMMDD)*

8. PREPARING ACTIVITY **DEFENSE INFORMATION SYSTEMS AGENCY (DISA)**

a. NAME	b. TELEPHONE *(Include Area Code)*
Rose D. Satz	(1) Commercial (2) AUTOVON
c. ADDRESS *(Include Zip Code)* Director JIEO Attn: TBBF Ft. Monmouth, NJ 07703-5613	**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:** Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340

DD Form 1426, OCT 89 *Previous editions are obsolete*.198-290